

1 What is claimed is:

2 1. A dry cementitious composition comprising cement and
3 CKD as major components and having a weight ratio of cement
4 to CKD between about 2/3 and 3/1.

5 2. The dry cementitious composition of claim 1, wherein
6 the weight ratio is no greater than about 7/3.

7 3. The dry cementitious composition of claim 1, wherein
8 the weight ratio is no greater than about 3/2.

9 4. The dry cementitious composition of claim 1, wherein
10 the dry cementitious composition is at least about 70% by
11 weight cement and CKD.

12 5. The dry cementitious composition of claim 1, wherein
13 the dry cementitious composition is at least about 90% by
14 weight cement and CKD.

15 6. The dry cementitious composition of claim 1, wherein
16 the dry cementitious composition is blended.

17 7. A hydraulic cementitious slurry comprising:
18 a predetermined amount of a dry cementitious
19 composition which comprises cement and CKD as major
20 components and has a weight ratio of cement to CKD is
21 between about 2/3 and 3/1; and
22 a predetermined amount of water of at least about 6
23 gallons per sack of the dry cementitious composition.

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1 8. The hydraulic cementitious slurry of claim 7, wherein
2 the weight ratio of cement to CKD is no greater than about
3 $7/3$.

4 9. The hydraulic cementitious slurry of claim 7, wherein
5 the weight ratio of cement to CKD is no greater than about
6 $3/2$.

7 10. The hydraulic cementitious slurry of claim 7, wherein
8 the dry cementitious composition is at least about 70% by
9 weight cement and CKD.

10 11. The hydraulic cementitious slurry of claim 7, wherein
11 the dry cementitious composition is at least about 90% by
12 weight cement and CKD.

13 12. The hydraulic cementitious slurry of claim 7, wherein
14 the predetermined amount of water is no greater than about
15 12 gallons per sack of the dry cementitious composition.

16 13. A hard cured cementitious body produced by curing the
17 hydraulic cementitious slurry of claim 7, wherein the
18 predetermined amount of a dry cementitious composition which
19 comprises cement and CKD, the weight ratio of cement to CKD,
20 and the predetermined amount of water per sack of the dry
21 cementitious composition are effective values for causing
22 the hard cured cementitious body to have a compressive
23 strength of at least about 1000 psi and a maximum
24 permeability no greater than 0.1 md.

1 14. A process for producing dry blended cement and CKD
 2 useful for forming an effective hydraulic cementitious
 3 slurry when slurried with water comprising:
 4 (a) loading into a suitable transporting container a
 5 predetermined weight of CKD;
 6 (b) thereafter, loading into the container at a cement
 7 source site, a predetermined weight of cement on top of the
 8 CKD, the predetermined weights producing a weight ratio of
 9 cement to CKD between about 2/3 and about 3/1; and
 10 (c) transporting the transporting container site to an off-
 11 loading site and allowing vibration of the transporting
 12 container during transit to automatically dry blend the
 13 cement and CKD sufficiently for forming an effective
 14 hydraulic cementitious slurry when slurried with water,
 15 without requiring any further dry blending of the cement and
 16 CKD after off-loading from the transporting container.

17 15. The process of claim 14, wherein the weight ratio of
 18 cement to CKD is between about 2/3 and about 3/2.

19 16. (A process for forming a hydraulic cementitious slurry)
 20 effective for closing an abandoned well comprising:
 21 (a) dry blending a predetermined amount of cement and a
 22 predetermined amount of CKD to produce a dry blended
 23 cementitious composition, the predetermined amounts of
 24 cement and CKD having a weight ratio of cement to CKD
 25 between about 2/3 and 3/1; and
 26 (b) slurring the dry blended cementitious composition with
 27 a predetermined amount of water sufficient to form a
 28 hydraulic cementitious slurry effective for closing an
 29 abandoned well.

1 17. The process of claim 16, wherein the weight ratio of
2 cement to CKD is between about $2/3$ and about $3/2$.

3 18. A method of determining cost for supplying dry blended
4 cement and CKD to an off-load site comprising:

5 (a) determining a cost of procuring a predetermined amount
6 of cement and CKD from a cement source;

7 (b) determining a transportation cost for delivering the
8 predetermined amount of cement and CKD in a dry blended
9 condition from the cement source to the off-load site;

10 (c) determining a cost of off-loading the predetermined
11 amount of cement and CKD in the dry blended condition at the
12 off-load site; and

13 (d) determining a cost for supplying cement and CKD in a
14 dry blended condition to the off-load site by summing each
15 of the above-mentioned costs.

16 19. A method of determining a plurality of summed cost for
17 supplying cement and CKD in a dry blended condition to an
18 off-load site comprising:

19 (a) determining cost of procuring a predetermined amount of
20 cement and CKD from a plurality of cement sources;

21 (b) determining transportation cost for delivering th
22 predetermined amount of cement and CKD from each the
23 plurality of cement sources to the off-load site;

24 (c) determining the cost of off-loading the predetermined
25 amount of cement and CKD from each source at the off-load
26 site; and

27 (d) determining cost for supplying blended dry cement and
28 CKD to the off-load site by summing each of the above-
29 mentioned costs for each of the cement sources thereby
30 determining a plurality of summed costs.

1 20. The method of claim 19, further comprising determining
2 a yield resulting from forming a hydraulic cementitious
3 slurry for each of the plurality of cement sources thereby
4 determining a plurality of yields; and
5 providing a price quote for supplying a predetermined
6 amount of dry blended cement and CKD to the off-load site
7 based on the plurality of yields and the plurality of summed
8 costs.

9 21. A method of determining a lowest cost per unit volume
10 of a hydraulic cementitious slurry comprising the steps of:
11 (a) determining cost of procuring a cement and a CKD in a
12 predetermined weight ratio of cement to CKD at and from a
13 cement source;
14 (b) determining yields of hydraulic cementitious slurries
15 formed by slurring a dry cement-CKD blend having the
16 predetermined weight ratio of cement to CKD with various
17 amounts of water;
18 (c) determining which of the hydraulic cementitious
19 slurries when cured over a predetermined period of time will
20 meet or exceed a predetermined specification; and
21 (d) determining a hydraulic cementitious slurry having a
22 lowest cost per unit volume using the dry cement-CKD blend
23 and which meets or exceeds the predetermined specification.

24 22. The method of claim 21, further comprising determining
25 a cost for supplying the dry cement-CKD blend from the
26 cement source to an off-load site using the hydraulic
27 cementitious slurry determined to have the lowest cost per
28 unit volume and which meets or exceeds the predetermined
29 specification.

1 23. The method of claim 21, further comprising:
2 repeating steps (a), (b), (c) and (d) except with at
3 least one more dry cement-CKD blend having a predetermined
4 weight ratio of cement to CKD which is different than the
5 first mentioned predetermined weight ratio of cement to CKD
6 and determining the hydraulic cementitious slurry having the
7 lowest cost per unit volume with the at least one more dry
8 cement-CKD blend; and
9 determining a cost for supplying one of the dry blends
10 of the cement and the CKD from the cement source to an off-
11 load site based on the hydraulic cementitious slurry
12 determined to have the lowest cost per unit volume and which
13 meets or exceeds the predetermined specification.

14 24. The method of claim 23, wherein the first mentioned
15 predetermined weight ratio of cement to CKD is about 2/3,
16 and wherein the at least one more predetermined weight ratio
17 of cement to CKD is about 3/2.

18 25. The method of claim 24, wherein the at least one more
19 predetermined weight ratio of cement to CKD also includes a
20 weight ratio of about 1/1.

21 26. The method of claim 25, wherein the predetermined
22 specification is a cured plug having at least a
23 predetermined compressive strength while not exceeding a
24 predetermined maximum permeability.